



JOHN F. KENNEDY SPACE CENTER, NASA

KENNEDY SPACE CENTER, FLORIDA 32899

REPLY TO
ATTN OF:

AA-GSO-3/5724/71-89-28

APR 1 1971

TO: Distribution

FROM: Manager, Apollo-Skylab Programs, AA

SUBJECT: Skylab Program Directive #34, "Skylab Program CCB Controls and Reporting Requirements"

The subject document, attached for your information, was approved by William C. Schneider, Director, Skylab Program Office. You will find this document corresponds to the Apollo Program Directive 34C, "Apollo Program CCB Controls and Requirements", issued by Rocco Petrone. As you know the Apollo Configuration Management System is being used for Skylab at KSC; therefore, no change in KSC Skylab Configuration Management requirements will be made at this time.


Thomas W. Morgan
Brigadier General, USAF

Enclosure: a/s

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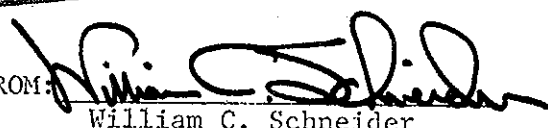
TS10304-6

January 19, 1971

SKYLAB PROGRAM DIRECTIVE NO. 34

TO : Distribution

FROM:


William C. Schneider
Director, Skylab Program

SUBJECT : Skylab Program CCB Controls and Reporting Requirements

OFFICE OF PRIME RESPONSIBILITY: Skylab Engineering (MLE)

REFERENCE : The following documents, of latest issue, form a part of this Program Directive:

- (a) NHB 8040.1, AAP Configuration Management Requirements
- (b) SE-140-001-1, Skylab Program Specification
- (c) M-D ML 3200.117, AAP Directive No. 10, AAP Nonconformance Reporting and Corrective Action
- (d) M-D ML 3200.125, Skylab Program Directive No. 43, Operations Directive
- (e) M-D ML 3200.107, Skylab Program Directive No. 4, Skylab Program Work Authorization
- (f) M-D MA 3200.033, Apollo Program Directive No. 18, Changes to Apollo Hardware and Software for the Apollo Applications Program
- (g) M-D ML 3200.115, AAP Directive No. 26, Intercenter Responsibilities for Support and Preparation of KSC Test and Checkout Plans and Procedures
- (h) NHB 8040.2, Apollo Configuration Management Manual

I. PURPOSE

The purpose of this directive is to establish, for the Skylab Program, the Headquarters-to-Center relationship in the area of configuration management, and to establish pertinent CCB controls and reporting requirements.

II. SCOPE

This directive establishes configuration management criteria and requirements for:

- a. Processing of changes requiring Level I CCB approval (Section I).
- b. Content of change packages submitted for Level I CCB disposition (Section II).
- c. Center-to-Program Office (ML) reporting requirements (Section III).
- d. Categorizing of changes which may be approved by a Level II CCB (Section IV).
- e. Control of open work and processing of changes at KSC (Section V).

III. APPLICABILITY

This directive is applicable to all Skylab Program effort. Center Program Managers performing Skylab effort shall institute procedures to implement this directive, where such procedures are not already established.

SECTION 1

CRITERIA AND PROCEDURES FOR CHANGES
REQUIRING LEVEL I CCB APPROVAL

A. APPLICABILITY

All proposed changes falling within the criteria set forth in paragraphs B1 through B8 (Pre-FRT) shall be submitted to the Skylab Program Director's Level I CCB for approval prior to implementation, in accordance with the procedure specified in paragraph C.1. Implementation is defined as design procurement, fabrication or installation. Proposed changes falling within the criteria set forth in paragraph B9 (Post-FRT) shall require Level I disposition in accordance with the procedure specified in paragraph C.2.

B. CRITERIA

Approval by the Skylab Program Director (Level I CCB) prior to implementation is required for all changes or program actions meeting any of the following criteria:

1. Technical Requirements

Any change to Skylab hardware, software or facilities which will or may result in the inability to meet the performance, safety, reliability, design and other technical requirements established in the Skylab Program Specification (Reference b) or which interjects into the design new category I or II single failure points (SFPs) as defined in Appendix C of Reference (c).

2. Mission Requirements

Any change to Skylab hardware, software or facilities which will or may result in the inability to meet the operations plan and mission objectives and requirements set forth in the Skylab Program Operations Directive (Reference d).

3. Program Milestones

Any change to Skylab hardware, software or facilities which may or will affect any milestone established in the Skylab Program Work Authorization (Reference e).

4. Experiment Requirements

A change in any of the following items that are related to experiments assigned to Skylab by the Associate Administrator for Manned Space Flight and approved by the Skylab Program Director:

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4. Experiment Requirements (Continued)

- a. The experiments assignments and operations planning requirements contained in the Skylab Program Operations Directive (Reference d).
- b. The technical requirements defined in Section I, Part II of an approved Experiment Implementation Plan (EIP).

5. Intercenter Changes

All intercenter changes which do not otherwise meet Level I criteria but which cannot be resolved to the mutual satisfaction of the Centers concerned.

6. Apollo Changes

Any changes proposed to Apollo Program end items to meet authorized requirements of the Skylab Program (Reference f). (Procedures for requesting change approval for these changes will be the same as for the Routine Procedure set forth in paragraph C.1.a below.)

7. Funding Limitations

- a. Any change which is in excess of the dollar value specified for the following:

OWS, AM, MDA, ATM, Payload Shroud,	
CSM (Skylab Unique), IU, Launch	\$ 500,000
Vehicle Stages, GSE, G&N	

- b. Any change which increases the total cost of an experiment in excess of that agreed to with the MSFEB.

8. General Requirements

- a. Other change categories may be elevated to Level I by direction of the Program Director. (Note: in these instances, the required direction will be implemented and, if appropriate, this directive will be revised. Temporary elevations of change authority will not be incorporated in this directive.)
- b. Any change initiated in anticipation of changes requiring future Level I CCB approval.

9. Post FRT/CDDT Changes

Changes which are to be incorporated between FRT/CDDT and Launch for each mission require Level I approval prior to incorporation. Only mandatory changes will be considered, and approval by the Program Director or designee will be required. Coordination requirements are set forth in paragraph C.2 below. Changes subject to this control shall be:

9. Post FRT/CDDT Changes (Continued)

- a. All changes proposed between FRT/CDDT and Launch.
- b. All changes to the Space Vehicle and supporting functional GSE and ESE, approved prior to FRT for which incorporation has not been accomplished.
- c. Procedural changes to the extent the FRT may be invalidated. These changes will be acted upon in accordance with the latest issue of (Reference g), "Preparation of Test and Checkout Plans Procedures at KSC".
- d. Changes to Mission Rules other than administrative and typographical corrections.

C. PROCEDURES1. Pre-FRT/CDDT

At any time prior to FRT/CDDT, procedures for requesting approval of Level I changes identified in the criteria of Paragraph B.1 are:

a. Routine Procedure

Skylab Center Program Managers shall submit to the Skylab Program Director change requests which include results of prior coordination with other affected Centers, an assessment, recommendations, and the change package requirements called for in Section II of this Directive.

b. Expedited Change Procedure

An "Expedited" change is one which, if not expeditiously accomplished, results in a condition which may cause injury to personnel, damage to equipment or may cause undue delays in program schedule prior to FRT. Interim approval may be requested by TWX, with the change package to follow within 30 calendar days.

c. Urgent Change Procedure

Changes to the space vehicle at KSC which impact a launch date or mission objectives are "urgent" changes. Interim approval will be requested from the Skylab Program Director or his Deputy by TWX or telephone, with the change package to follow in all cases within 30 calendar days.

- d. In all cases, the responsible Center Program Manager shall perform intercenter coordination of changes as required to identify and resolve areas of intercenter responsibilities prior to submittal of the Change Package (See Section II-1-b) for Level I CCB disposition.

2. Post-FRT/CDDT

Approval of changes described in paragraph B.9 shall be requested from the Skylab Program Director, or designee, during this period. In implementing this requirement the following shall apply:

- a. During the Flight Readiness Review each Center shall submit an annotated list (with necessary details) to the Program Director, or his designee, covering those changes approved prior to FRT/CDDT whose installation has not been completed at the completion of FRT/CDDT. Work on changes already in process will not be stopped unless specifically disapproved by the Program Director, or his designee. The Program Director, or his designee, will notify each Center of any disapprovals.
- b. Potential changes under consideration by MSC or MSFC after FRT will be routed to the Program Director for his review simultaneously with routing to KSC. When the Program Director, or his designee, does not concur with the proposed change, he shall direct KSC to discontinue all activities with respect to the subject changes and shall inform MSC/MSFC immediately. When the Program Director, or his designee, concurs with the need for the potential change, the usual Level II intercenter change procedures shall apply, with final approval by the Program Director, or his designee.
- c. All changes, including Field Engineering Changes (FEC's) shall receive expedited handling and may be submitted to the Program Director, or his designee, by telephone with formal ECP action to follow, within 30 days. In the case of FEC's, KSC may approve and authorize installation subject to prior approval to the cognizant MSFC or MSC senior resident manager at KSC. The Program Director, or his designee, shall be informed within 24 hours of each such case. Use of FEC's is limited to the correction of emergency situations.
- d. Each Center shall designate a single point of contact through which change request processing will be channeled to and from the Program Director, or his designee.

The Skylab Program Configuration Management Officer (CMO) will support the Program Director, or his designee, and shall be a focal point for information flow and documentation of changes in the office of the Program Director, or his designee, at KSC.

D. LEVEL I DIRECTED CHANGES

The Skylab Program Director may, from time to time, direct changes through issuance of Level I CCBs. The CCBs will be categorized and Center action shall be as follows:

D. LEVEL I DIRECTED CHANGES (Continued)1. "Normal" CCB Directives

The form of Attachment A (unmarked) shall be used to transmit the decision of the CCB.

2. "Urgent" CCB Directives

"Urgent" CCB Directives shall be transmitted by the most expeditious means to initiate immediate action. Center response will be on an expedited basis. Attachment A forms marked "URGENT" will be used and shall be distributed by the most expeditious means possible.

3. "Interim" CCB Directives

"Interim" CCB Directives shall be transmitted on those occasions when immediate implementation in absence of adequate formal change papers is desired. Attachment A forms marked "INTERIM" shall be used. These will direct the Centers to begin implementing the change immediately and, concurrently, to provide a change proposal. Upon receipt of full documentation, a decision whether to confirm or stop the change shall be documented by issuance of a "Normal" CCBD.

4. "Impact Only" CCB Directives

"Impact Only" CCB Directives shall be used to direct sufficient work to determine impact of a change under consideration. Attachment A marked "IMPACT ONLY" will be used. This will authorize Center managers to investigate with their contractors, if necessary, the impact of the proposed change. The response shall be a change proposal. Decision to implement the change shall be documented by issuance of a "Normal" CCB Directive.

Proposed changes to Level I documentation will normally be forwarded on an Engineering Change Request via an "Impact Only" CCBD. Each proposed change will be numbered to facilitate identification, will be written to show proposed new wording for the document together with the existing wording, and will list the reason or justification for the proposed change.

- a. One copy of each proposed change will be mailed to the Center Skylab Program Offices for evaluation, impact assessment, and action as appropriate. Internal Center distribution and coordination will be made by the Center Program Office.
- b. Center impacts will be provided to NASA Headquarters (MLE/CMO) for each proposed change by a Requirements ECP in accordance with NHB 8040.2, Exhibit VIII, para. 6 (Reference h) or equivalent, listing cost and schedule impact if the proposed change is approved and recommended rewording of the proposed change if appropriate.

c. The following response times (from time of Center receipt) are expected for Center action on routine proposed Level I changes:

1) Documentation change only 2 weeks

2) Hardware or Software 4 weeks
(computer programs)

3) If emergency or urgent action is required for any proposed change, the Center shall respond in accordance with the required suspense date shown in the "Impact Only" CCBD.

d. Final approved copies of the change, (with copies of the CCB Directive) will be forwarded to the Center Program Offices.

c. The following response times (from time of Center receipt) are expected for Center action on routine proposed Level I changes:

1) Documentation change only 2 weeks

2) Hardware or Software 4 weeks
(computer programs)

3) If emergency or urgent action is required for any proposed change, the Center shall respond in accordance with the required suspense date shown in the "Impact Only" CCBD.

d. Final approved copies of the change, (with copies of the CCB Directive) will be forwarded to the Center Program Offices.

SECTION II

CHANGE PACKAGE REQUIREMENTS

Each Change Package submitted to the Level I CCB for disposition shall include the following:

1. Hardware Changes

- a. The Engineering Change Proposal (ECP) shall be completed in accordance with the requirements of MIL-STD-480 to the extent applicable.
- b. A data transmittal signed by the Center Skylab Program Manager or Launch Vehicle Program Manager shall be provided. The transmittal shall include:
 - 1) Basis for submittal to Level I CCB and urgency of required action,
 - 2) A statement as to whether the change is mandatory or non-mandatory.
 - (a) If mandatory, include a brief statement of why.
 - (b) If non-mandatory, a brief statement of why approval is recommended.
 - 3) Statement of coordination with other affected Centers.
- c. The Level II Configuration Control Board Directive (CCBD) or appropriate documentation showing approval of the change shall be provided.
- d. All significant back-up data used by the Center Level II CCB in formulating a decision or recommendation shall be provided. Back-up data shall include, but not be limited to, the following:
 - 1) The initiating means for change action, if other than the enclosed ECP. Example: Center Engineering Change Request or letter of recommendation from a Center Director.
 - 2) The basis for evaluation and decision by Center CCB.
 - (a) Engineering assessment of change by responsible office(s) including, as a minimum, the change evaluation data requirements shown on Attachment B.

1. Hardware Changes (Continued)

- (b) Specification Change Notices. Separate proposed SCNs shall be included for each Level I document, and/or each specification shown in the specification tree included in the Skylab Program Specification, which is affected by the change. In the event that neither of the foregoing is affected by the change, an SCN form shall be provided with the statement thereon "No Level I document or specification affected".
- (c) Preliminary Interface Revision Notices (PIRNs) for Level A ICDs which require change because of the hardware change (if available);
- (d) Cost estimate for total change implementation;
- (e) Appropriate drawings, schematics, sketches, photographs, or other material which will clarify and assist in understanding the recommended changes. Emphasis shall be placed on demonstrating the necessity for the change and the consequence of not making the change;
- (f) Schedule impact;
- (g) Software impact. If the change will impact software, the details of the software change shall be included.
- (h) Single Failure Points. If the change would interject new category I or II Single Failure Points (SFPs) into the design, the details of SFPs shall be included and routine program SFP controls shall be adhered to. (Reference c)
- (i) Test Program Impact. If the change would impact the testing criticality category 1 and 2 hardware, the details of the test program change including those affecting other modules and experiments should be included.
- (j) Trade Off Study. Where significant costs and schedule impacts are involved in a proposed change, alternate change options should be identified and their relative performance costs and schedule implications included.

2. Software Changes

Changes to either the ground or flight computer programs shall comply with the MIL-STD-480 format to the fullest possible extent. Particular attention shall be accorded to impact of software changes on hardware and test and checkout procedures. Change submissions should include all applicable information similar to that listed in paragraph 1 above.

3. Documentation Changes

- a. Proposed changes which are not the result of a hardware change or will not result in a hardware change will be submitted by a Requirements ECP, or equivalent, prepared in accordance with NHB 8040.2, Exhibit VIII, paragraph 6.3, (Reference h). Particular emphasis will be placed on describing the reason for the change (e.g., "as built" does not meet documentation requirements; however, hardware "as tested" satisfies operation requirements, etc.).
- b. A data transmittal signed by the responsible Center Program Manager shall be provided. The data transmittal will include:
 - 1) Basis for submittal to Level I CCB and urgency of required action.
 - 2) Statement of coordination with other affected Centers.
 - 3) Statement of estimated program schedule and cost impact of not approving the proposed change.
- c. Level II CCBD or equivalent documentation and associated change package.
- d. Preliminary Interface Revision Notices (PIRNs) for proposed Level A ICD changes (if available).

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SECTION III

CONFIGURATION MANAGEMENT REPORTING REQUIREMENTSA. PURPOSE

The purpose of the Center reporting requirements defined in this section is to increase visibility of the Program Director and Program Office Directorates with respect to: the status of Specification/ICD preparation and release, trends in types and numbers of changes, tracking of selected changes of programmatic impact and to provide information required in support of periodic reporting to the Associate Administrator, Office of Manned Space Flight.

B. SCOPE

This section defines the Center-to-Skylab Program Office (ML) Configuration Management Reporting requirements and as such incorporates, condenses and supersedes all prior correspondence and directives on this subject.

C. APPLICABILITY

This section is applicable to all program levels where hardware, software, and facility changes which affect Skylab Program effort are initiated, approved and implemented. The focal point for coordinated and timely reporting of Configuration Management Data at each Center shall be the Manager of the Program Office performing Skylab related effort.

D. REPORTING REQUIREMENTS

The following data shall be transmitted to the Skylab Program CMO (MLE/CMO) with the frequency indicated.

- | | |
|---|-----------|
| 1. Level II and III CCB Directives | As Issued |
| 2. Level II and III CCB Agenda
and Meeting Minutes | As Issued |
| 3. Change Status Report | Weekly |
| 4. ICD/IRN Status | Monthly |
| 5. Specification Status | Monthly |

Wherever possible, these requirements shall be fulfilled by documentation currently in use at the Centers.

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SECTION IV

CATEGORIES OF ENGINEERING CHANGES WHICH
SHALL BE APPROVED AT LEVEL II

A. APPLICABILITY

All proposed changes falling within the categories set forth in Paragraph B may be approved by the Level II CCBs provided they do not impact the criteria requiring Level I CCB approval set forth in Section I.

B. CATEGORIES

The following categories of changes shall be subject to approval by the Level II CCBs:

1. Changes required to assure flight or launch crew safety and/or mission success, i.e., mandatory changes.
2. Normal software and GSE reconfiguration changes associated with each mission.
3. Changes that will substantially reduce workload or checkout time at KSC. Such changes must be approved by the Level II CCBs and GSE changes from MSFC or MSC must be formally concurred in by the KSC Level II CCB regarding the expected improvement and other assessed KSC impact. Flight hardware changes must be approved, installed and validated prior to transfer of the vehicle to the pad. GSE changes must be approved, installed and validated prior to FRT/CDDT, whichever is first.
4. Changes that improve the ability to meet launch opportunities by reducing the probability of a delay or scrub when failure history and/or engineering analysis indicates the high probability of an occurrence that could result in missing the launch opportunity. Such changes must be approved by the Level II CCBs and GSE changes from MSFC or MSC must be formally concurred in by the KSC Level II CCB. Flight hardware changes must be approved, installed, and validated prior to FRT/CDDT, whichever is first. These changes must be considered with emphasis on their relationship to the overall KSC checkout flow timing. That is, such changes should only be considered for implementation if their impact is to a critical portion of the checkout flow at KSC in which delays can result in missing the launch opportunity.
5. Occasional down-the-line changes that do not fall completely within the above categories, i.e., certain flight anomaly corrections, etc. These changes must be held to an absolute minimum.

Changes in the above non-mandatory categories will be reviewed by the Apollo Program Director's Office through the Level II CCBs forwarded in accordance

B. CATEGORIES (Continued)

with Section IV. These CCBs are to reflect approval by the Center Program Manager or his single designee and, in the GSE cases, must contain the joint MSFC/KSC or MSC/KSC approvals.

C. LEVEL III CCBs

Program Managers are authorized to continue operation of Level III and lower levels of CCBs provided their prerogatives are limited so as not to impact the criteria requiring Level II CCB approval set forth in paragraph (B) above.

SECTION V

CONTROL OF WORK AND HARDWARE CHANGES AT KSCA. APPLICABILITY

This Section is applicable to all Space Vehicle hardware, software, and supporting GSE from time of delivery at KSC to launch, as well as KSC furnished equipment and facilities.

B. CRITERIA1. Open Work at KSC

As a matter of policy, open work at KSC, associated with hardware and software delivered to KSC, shall be kept to a minimum. All hardware and software, including changes approved for incorporation therein, shall be completed at contractor's plants prior to delivery unless specific approval to the contrary has been granted by the cognizant Center. The concurrence of the KSC Skylab Program Manager, in all such actions, shall be required.

2. Changes at KSC

a. After arrival of Space Vehicle hardware, software and supporting GSE hardware at KSC, every effort will be made to limit changes to the mandatory category, SECTION IV, B.1 although changes in the categories of SECTION IV, B.2 may still apply. Responsibility for controlling changes remains with MSFC, MSC and centers responsible for experiment development for their respective areas of responsibility except when KSC has been specifically delegated such change authority.

b. Changes proposed at KSC which affect KSC schedules shall be evaluated according to impact upon the following key milestones at KSC:

- 1) Applying power to launch vehicle
- 2) Orbital Assembly mechanical and electrical mating
- 3) Space vehicle overall test
- 4) Countdown demonstration test (CDDT)
- 5) Flight Readiness Test (FRT)
- 6) Launch date

C. PROCEDURE

Procedures for requesting approval of changes at KSC are as follows:

1. Pre-FRT/CDDT

a. As required in Section I, B.1 through B.8 when proposed changes to

C. PROCEDURE (Continued)

any space vehicle hardware/software at KSC have an impact on an established program milestone, launch date or planned mission objectives, these changes shall be considered to be Level I, and as such shall be submitted to the Skylab Program Director for his approval. Evaluation of impact upon schedules shall be within consideration of the criteria set forth in paragraph B.2.b of this Section.

- b. All requests for changes submitted by KSC to MSC or MSFC shall be approved by the KSC Skylab Program Manager or his Deputy prior to submission.
- c. Field Engineering Changes (FEC) and Expedited ECPs originated at KSC for the correction of emergency situations may be implemented upon approval of the cognizant MSFC or MSC Senior Resident Manager at KSC. The FEC or Expedited ECP shall be followed by a formal ECP within 30 calendar days. One ECP shall be prepared for each FEC or Expedited ECP.

An emergency situation exists when an engineering change is required to:

- 1) prevent bodily harm,
- 2) prevent serious damage to equipment, and
- 3) complete a schedule test, the delay of which would seriously impact the ability to comply with program commitments or scheduled milestones.

2. Post FRT/CDDT

Changes which are to be installed and verified between FRT/CDDT and launch shall require the approval of the Program Director, or his designee, as set forth in I.B.9.

3. Change Incorporation Status at KSC

KSC shall maintain a system that provides individual change incorporation status for spacecraft, launch vehicle, experiments, GSE, software, and facilities at KSC.

Attachments

- A. Configuration Control Board Directive
- B. Change Evaluation Data

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DISTRIBUTION:OMSF

M/Myers
MD/Mathews
ML/Schneider
MLD/Disher
ML-1/Ashley
MLA/Hanes (10)
MLB/Field (18)
MLE/Savage (15)
MLS/Hagner (10)
MLO/Evans (5)
MLQ/Cohen (8)
MA/Petrone (2)
MR/Wible
MF/Hamon (2)
MH/Allen (2)
MM/McLaughlin
MLE/Roberts (10)

Kennedy Space Center

AA/Morgan (50)

Manned Spacecraft Center

DIR/Gilruth
KA/Kleinknecht (75)

Marshall Space Flight Center

DIR/Rees
PM-SL-MGR/Belew (75)
PM-SAT-MGR/Smith (5)

Ames Research Center

A/Freeman (5)

GSFC

200/Vaccaro (5)

Langley

01.000/Nicks (5)
Mail Stop 106

Martin Marietta Corporation

R. Falck (30)

(1) <input type="checkbox"/> SV <input type="checkbox"/> AGE <input type="checkbox"/> FAC <input type="checkbox"/> TRAINING <input type="checkbox"/> GIE <input type="checkbox"/> DS RPIE			NASA ORG. _____			PAGE <u>1</u> OF _____					
(2) CCBD NUMBER			CONFIGURATION CONTROL BOARD DIRECTIVE			DATE: DAY MO. YR.					
(3) CONTRACTOR:			(19) ECP TITLE			SUPERSEDES DAY MO. YR. ISSUE OF					
(4) ECP NO.			(4A) DATE:			(20) NOMENCLATURE, CONTRACT END ITEM					
(5) SUPERSEDES ECP NO.			(5A) DATE:								
(6) END ITEM NO.			(21) EFFECTIVITIES						(22) PROCUREMENT ACTION REQUIRED		
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(8) TCTR NO. & TYPE									TYPE LEGEND P - PRODUCTION S - RETROFIT		
PART NO CHANGE: <input type="checkbox"/> YES <input type="checkbox"/> NO											
(10) SPARES AFFECTED <input type="checkbox"/> YES <input type="checkbox"/> NO											
(11) INTERFACE REQUIREMENTS											
(12) DESIGN DEFICIENCY <input type="checkbox"/> YES <input type="checkbox"/> NO											
(13) ECP NOTED IN BLOCK (4) IS <input type="checkbox"/> APPROVED AS WRITTEN <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> APPROVED WITH CHANGES. AS NOTED BELOW											
(14) SPECIFICATION NO.			REMARKS:						(23)		
(15) SPECIFICATIONS AFFECTED: PROGRAM SPEC NO. <input type="checkbox"/> YES <input type="checkbox"/> NO									CONCUR	NON CONCUR	
(16) PROJECT SPEC. NO. <input type="checkbox"/> YES <input type="checkbox"/> NO											
(17) SYSTEM SPEC NO. <input type="checkbox"/> YES <input type="checkbox"/> NO											
(18) CEI SPEC NO. <input type="checkbox"/> YES <input type="checkbox"/> NO											
PROG. MANAGER CCB-MSC			CONCUR	NON CONCUR	PROGRAM MANAGER MSC-IMCC			CONCUR	NON CONCUR	CHAIRMAN PROGRAM MANAGER CCB CHAIRMAN Skylab Program DIRECTOR CCB	
PROGRAM MANAGER CCB-MSFC					OTHER						
PROGRAM MANAGER CCB-KSC					OTHER						

CHANGE EVALUATION DATA

PCN.

CHANGE NO.

CATEGORY NUMBER

VEHICLE EFFECTIVITY

MODIFICATION INCORPORATION POINT

PROJECT/STAFF OFFICE(S)

RESPONSIBLE ENGINEER(S)

AFFECTED ORGANIZATIONS:

CHANGE ORIGINATED BY

ESTIMATED COST:

MANHOURS AT KSC.

TECHNICAL DESCRIPTION
OF CHANGE

1. JUSTIFICATION
2. HISTORY

CCBD NO.	DATE	DISPOSITION	CHAIRMAN
1	10/1/78	Adopted	W. H. H. H.
2	10/1/78	Adopted	W. H. H. H.
3	10/1/78	Adopted	W. H. H. H.
4	10/1/78	Adopted	W. H. H. H.
5	10/1/78	Adopted	W. H. H. H.
6	10/1/78	Adopted	W. H. H. H.
7	10/1/78	Adopted	W. H. H. H.
8	10/1/78	Adopted	W. H. H. H.
9	10/1/78	Adopted	W. H. H. H.
10	10/1/78	Adopted	W. H. H. H.
11	10/1/78	Adopted	W. H. H. H.
12	10/1/78	Adopted	W. H. H. H.
13	10/1/78	Adopted	W. H. H. H.
14	10/1/78	Adopted	W. H. H. H.
15	10/1/78	Adopted	W. H. H. H.
16	10/1/78	Adopted	W. H. H. H.
17	10/1/78	Adopted	W. H. H. H.
18	10/1/78	Adopted	W. H. H. H.
19	10/1/78	Adopted	W. H. H. H.
20	10/1/78	Adopted	W. H. H. H.
21	10/1/78	Adopted	W. H. H. H.
22	10/1/78	Adopted	W. H. H. H.
23	10/1/78	Adopted	W. H. H. H.
24	10/1/78	Adopted	W. H. H. H.
25	10/1/78	Adopted	W. H. H. H.
26	10/1/78	Adopted	W. H. H. H.
27	10/1/78	Adopted	W. H. H. H.
28	10/1/78	Adopted	W. H. H. H.
29	10/1/78	Adopted	W. H. H. H.
30	10/1/78	Adopted	W. H. H. H.
31	10/1/78	Adopted	W. H. H. H.
32	10/1/78	Adopted	W. H. H. H.
33	10/1/78	Adopted	W. H. H. H.
34	10/1/78	Adopted	W. H. H. H.
35	10/1/78	Adopted	W. H. H. H.
36	10/1/78	Adopted	W. H. H. H.
37	10/1/78	Adopted	W. H. H. H.
38	10/1/78	Adopted	W. H. H. H.
39	10/1/78	Adopted	W. H. H. H.
40	10/1/78	Adopted	W. H. H. H.
41	10/1/78	Adopted	W. H. H. H.
42	10/1/78	Adopted	W. H. H. H.
43	10/1/78	Adopted	W. H. H. H.
44	10/1/78	Adopted	W. H. H. H.
45	10/1/78	Adopted	W. H. H. H.
46	10/1/78	Adopted	W. H. H. H.
47	10/1/78	Adopted	W. H. H. H.
48	10/1/78	Adopted	W. H. H. H.
49	10/1/78	Adopted	W. H. H. H.
50	10/1/78	Adopted	W. H. H. H.
51	10/1/78	Adopted	W. H. H. H.
52	10/1/78	Adopted	W. H. H. H.
53	10/1/78	Adopted	W. H. H. H.
54	10/1/78	Adopted	W. H. H. H.
55	10/1/78	Adopted	W. H. H. H.
56	10/1/78	Adopted	W. H. H. H.
57	10/1/78	Adopted	W. H. H. H.
58	10/1/78	Adopted	W. H. H. H.
59	10/1/78	Adopted	W. H. H. H.
60	10/1/78	Adopted	W. H. H. H.
61	10/1/78	Adopted	W. H. H. H.
62	10/1/78	Adopted	W. H. H. H.
63	10/1/78	Adopted	W. H. H. H.
64	10/1/78	Adopted	W. H. H. H.
65	10/1/78	Adopted	W. H. H. H.
66	10/1/78	Adopted	W. H. H. H.
67	10/1/78	Adopted	W. H. H. H.
68	10/1/78	Adopted	W. H. H. H.
69	10/1/78	Adopted	W. H. H. H.
70	10/1/78	Adopted	W. H. H. H.
71	10/1/78	Adopted	W. H. H. H.
72	10/1/78	Adopted	W. H. H. H.
73	10/1/78	Adopted	W. H. H. H.
74	10/1/78	Adopted	W. H. H. H.
75	10/1/78	Adopted	W. H. H. H.
76	10/1/78	Adopted	W. H. H. H.
77	10/1/78	Adopted	W. H. H. H.
78	10/1/78	Adopted	W. H. H. H.
79	10/1/78	Adopted	W. H. H. H.
80	10/1/78	Adopted	W. H. H. H.
81	10/1/78	Adopted	W. H. H. H.

1. IMPACT IF APPROVED

REMARKS